

CLAIMS

We claim:

- 5 1. A joint for pipes comprising a bell, a spigot partially disposed within the bell, a locking
segment disposed between the bell and the spigot, and a retainer capable of holding said
locking segment in the bell during assembly, wherein said locking segment is adapted to
rotate in the absence of a fixed axis of rotation into locking engagement between the bell
and the spigot in response to movement of the spigot outward of the bell, and wherein
10 further the locking segment is adapted to resist rotation in response to said outward
movement beyond a desired maximum rotation by muring between a first surface of the
bell and a second surface of the bell, and wherein further the segment is adapted to resist
rotation beyond a desired limit of rotation in an opposite direction by muring within the
bell.
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2. A method of controlling radial pressures exerted between a bell and a spigot in a joint
comprising the steps of
 - a. Placing the segment within the bell, and
 - 20 b. Rotating the segment against a fulcrum on the interior of the bell such that a radially
inward portion of the segment rotates in the axially inward direction,
 - c. increasing radial forces between the bell and the spigot primarily by rotating the
locking segment about a different axis than the fulcrum, and
 - d. muring a portion of the segment between two surfaces of the bell, whereby further
25 rotation of the segment is arrested.
3. A gasket for use in connecting a spigot within a bell having an annular trough for
receiving a portion of the gasket, the gasket comprising a sealing portion, a retainer heel
adapted to mate with the annular trough, and a locking segment comprising a brake and a
30 toe, the toe having a tooth capable of penetrating into the spigot, the brake being disposed
at least partially within said retainer heel, such that when said retainer heel is placed in

the annular trough at least a portion of the brake is disposed within the annular trough, which brake possesses at least two points separated by a distance greater than the width of the annular trough, such that upon a maximum rotation a first of the at least two points resistively meets a first wall of the annular trough while a second of the at least two points resistively meets a second and opposing wall of the annular trough, such that rotation is arrested, and wherein further the brake aids in retention of the heel in the annular trough during insertion of the spigot into the bell.

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